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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BROWN, JENNINE M

ART UNIT

PAPER NUMBER

1755

DATE MAILED: 07/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/914,254

Applicant(s)

YABUNOUCHI ET AL.

Examiner

Jennine M. Brown

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 2,5,6 and 15-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 7-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5. 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1, 3-4 and 7-14, drawn to A Non Ionic Catalyst for the Polymerization of Olefins and Styrenes, classified in class 502, subclass 103.
- II. Claims 2, 15-17, 20, 23, 26, 31, 34 and 37, drawn to A Catalyst for the Polymerization of Olefins, classified in class 502, subclass 103.
- III. Claims 5, 18, 21, 24, 27, 29, 32, 35 and 38, drawn to An Ionic Catalyst for the Polymerization of Olefins Using Additional Compounds and Alkylating Agent, classified in class 502, subclass 103.
- IV. Claims 6, 19, 22, 25, 28, 30, 36 and 39, drawn to A Catalyst for the Polymerization of Olefins Using Additional Compounds and Alkylating Agent, classified in class 502, 103.

The inventions are distinct, each from the other because of the following reasons:

Inventions I, II, III and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, inventions I, II, III and IV use different complexes to form the catalyst. Group I uses a non ionic oxygen containing compound with the option of using an alkylating agent. Group II uses a no complexing agent with the

option of using an alkylating agent. Group III uses an additional complex not disclosed in I or II, an oxygenated compound which is also ionic and requires an alkylating agent. Group IV uses no oxygenated or ionic compound, uses an additional complex not disclosed in I or II and requires an alkylating agent.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Claims 1, 3-4 and 7-14 are generic to a plurality of disclosed patentably distinct species comprising 1 to 6. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed.

Claims 2, 15-17, 20, 23, 26, 31, 34 and 37 are generic to a plurality of disclosed patentably distinct species comprising 1 to 6. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed.

Claims 5, 18, 21, 24, 27, 29, 32, 35 and 38 are generic to a plurality of disclosed patentably distinct species comprising 1 to 6. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed.

Claims 6, 19, 22, 25, 28, 30, 36 and 39 are generic to a plurality of disclosed patentably distinct species comprising 1 to 6. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record

showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation with Rohita Jayasuriya on 06/19/2003 a provisional election was made with traverse to prosecute the invention of Invention I, claims 1, 3-4 and 7-14. Affirmation of this election must be made by applicant in replying to this Office action. Claims 2, 5-6 and 15-39 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and **legal phraseology** often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

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The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 4, 7-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Zambelli, et al. (US 6271313 B1).

Zambelli, et al. teach methaluminoxane acts as an alkylating agent (D), therefore because it is disclosed it could also be representative of compound (C). The titanium or zirconium compound in column 4 is representative of compound (A) and the siloxy compound is representative of compound (B) (col. 2, l. 18-27; col. 4, l. 9-30; col. 5, l. 66 – col. 6, l. 7; col. 6, l. 31-33, 38-39; col. 14, l. 30-42, 52-64; col. 15, l. 1-37; col. 17, l. 12-20, 31 – col. 19, l. 50).

Claims 1, 3, 4, 7-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuber, et al. (US 6242544 B1).

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Kuber, et al. teach methaluminoxane (D) and/or (C), the titanium or zirconium compound (figure I) (A) and siloxy compound (B) (col. 3, l. 8 – col. 6, l. 33; col. 9, l. 8-61; col. 10, l. 20-28; col. 11, l. 30-32; col. 12, l. 29-32).

Claims 1, 3, 4, 7-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Starzewski, et al. (US 6191241 B1).

Starzewski, et al. teach methaluminoxane (D) and/or (C), the titanium or zirconium compound (Examples 8, 9, 10, 11, 14, 18, 19, 20, 21, 22, 23, 25, 26, 27, 29, 30) (A) and siloxy compound (B) (col. 2, l. 14 – col. 3, l. 60; col. 5, l. 31 – col. 6, l. 8; col. 9, l. 57 – col. 10, l. 59; figures in col. 11 and 12; col. 13, l. 29-49; col. 21, l. 32-34).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3, 4 and 12 are rejected under 35 U.S.C. 103(a) as being obvious over Ishihara, et al. (US 4990580).

Claims 1 and 4-6 of Ishihara, et al. teach a transition metal compound (titanium compound), an oxygen containing compound (methylaluminoxane) but does not teach an alkoxy silane compound. It is well known in the art that silanes and siloxanes are used as supports for both catalysts and cocatalysts and therefore it would have been obvious to one of ordinary skill in the art to combine a support to the transition metal and oxygen containing compounds.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3, 4, 7-14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of U.S. Patent No. 6107232. Although the conflicting claims are not identical, they are not patentably distinct from each other because all of the components of the catalyst as well as the use for copolymerization of olefins and styrenes are disclosed.

Claims 1, 3, 4, 7-14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 9-12 of U.S. Patent No. 6255244 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because all of the components of the catalyst as well as the use for polymerization of olefins and styrenes are disclosed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennine M. Brown whose telephone number is (703) 305-0435. The examiner can normally be reached on M-F 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell can be reached on (703) 308-3823. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 879-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

jmb
June 30, 2003



Mark L. Bell
Supervisory Patent Examiner
Technology Center 1700